REMARKS

Claims 1-6, 8-16, 18, 20-31 and 33-41 are pending in the application. Claims 1-6, 8-16, 20, 27-31 and 35-39 are rejected. Claims 1, 18, and 41 are amended. The support for claim 1 and 18 amendment can be found, e.g., in the paragraph on page 16, line 25 – page 17, line 8. Support for claim 27? The support for claim 41 can be found, e.g., in the paragraphs on page 16, line 25 – page 17, line 8. Claims 21-26, 33, 34 and 40 are withdrawn.

Reexamination of the claims is respectfully requested.

Applicants' specification is referred to as Carter hereinafter (WO 2005/064349).

Rejections under 35 USC 102

Claims 1-6, 8-10 and 12-16 are rejected under 35 USC 102(b) as being anticipated by Buechler (US 6,156,270).

In support of the novelty rejection of claim 1, it is asserted that Buechler teaches a flow front control features on the opposing surface comprising one or more regions of hydrophobic material occupying a portion of the opposing surface and one or more regions of hydrophilic material occupying a portion of the opposing surface. (Office Action, page 4; Advisory Action.) While Buecher generally teaches that a capillary space comprising hydrophobic surface and hydrophilic surface (Col. 5 lines 40-50), this teaching does not apply to the surface opposing to the detection surface. To the contrary, Buecher teaches that the surface opposite the diagnositic element is hydrophobic. Buecher only states that "the hydrophobic surfaces opposing the diagnostic element can have a tendency to become hydrophilic as the reaction mixture progresses through the diagnostic element." (Beucher, Col. 17 lines 24-30.) That is, the opposing surface in Buecher is a hydrophobic surface that comprises only hydrophobic material but it does not comprise hydrophilic material before reaction mixture passes the surface. Further, hydrophilic material is not an inherent feature to a hydrophobic surface. Hence, Beucher does not teach or suggest a flow front control features on the opposing surface using a combination of regions of hydrophobic and hydrophilic materials.

Additionally, Buechler teaches that the use of a hydrophobic material on the opposing surface results in improved performance of the diagnostic device:

> "In a preferred embodiment the surface opposing the diagnostic element 6 is hydrophobic such that the reaction mixture repels this surface. The repulsion of reaction mixture to the surface opposing the diagnostic element 6 forces the reaction mixture, and particularly the protein conjugates, to the surface where capture occurs, thus improving the capture efficiency of the components of the reaction mixture to the capture zone."

(Beucher, Col. 17, lines 17-24.) Accordingly, Buechler teaches that hydrophilic materials should not be used for the opposing surface because it would lead to diminished performance of the device (i.e., decreased capture efficiency). Therefore, Beucher does not teach each and every element of claim 1, either expressively or inherently described.

To further this application toward allowance, however, Applicants have amended claim 1 to recite the feature that an opposing surface comprises a flow front control feature comprising a plurality of regions of hydrophobic material occupying a portion of the opposing surface and a plurality of regions of hydrophilic material occupying a portion of the opposing surface. Even after part of the opposing surface become hydrophilic after reaction mixtures passes the surface, the opposing surface has a single region having hydrophobic property and a single region having hydrophilic property. Therefore, claim 1 is patentable over Buechler. Claims 2-6, 8-9, and 11-16 each add additional features to claim 1 and are patentable over Buechler for at least the same reasons.

The amended claim 41 recites the flow front control feature, which is on the opposing surface, comprises a plurality of pairs of successive bands of hydrophobic material and hydrophilic material wherein each pair of successive bands extends across a width of the detection chamber. Similar to reasons presented above, Boescher does not teach or suggest the opposing surface having a plurality of pairs of successive bands of hydrophobic material and hydrophilic material. Therefore, claim 41 is patentable over Buecher.

Claims 27-31 and 35-39 are rejected under 35 USC 102(b) as being anticipated by Wiegner (US 4,013,722).

Wiegener teaches a sealed container with frangible partition for storing and mixing. (*See* Wiegner Col. 1, lines 11-21.) The container may have two compartments with a foil as a seal in between; each compartment is preloaded with material. (*See* Wiegner, Col. 2 lines 38-53.)

Wiegener does not teach or suggest an input port that allows material, such as a collected specimen or sample material (See Carter, pp. 29 lines 15-19). Contrarily, each compartment of the container in Wiegener is loaded with material and sealed when the container is assembled. (*See* Wiegner, Col. 2 lines 38-53.) Therefore, Wiegener does not teach or suggest each and every element in claim 27 and claim 35. Claims 27 and 35 are patentable over Wiegener.

Claims 28-31 and 36-39 add additional features their respective base claims and are patentable over Wiegener for at least the same reasons.

Rejection under 35 USC 103

Claim 11 is rejected under 35 USC 103(a) as being unpatentable over Buechler. Claims 18 and 20 are rejected under 35 USC 103(a) as being unpatentable over Buechler in view of Wiegner (US 4,103,772).

Claim 11 adds additional features to claim 1 and is patentable over Buechler for at least the same reasons.

The amended claim 18 recites the feature that an opposing surface comprises a flow front control feature comprising a plurality of regions of hydrophobic material occupying a portion of the opposing surface and a plurality of regions of hydrophilic material occupying a portion of the opposing surface. Because Buechler and Wiegner collectively do not teach or suggest, at least the element of the opposing surface having a plurality of regions of hydrophobic material and a plurality of regions of hydrophilic material.

For at least the reasons described above, a prima facie case of obviousness has not been established with respect to claim 18, and the rejection of claim 18 under 35 U.S.C. § 103(a) over Buechler in view of Wiegner has been overcome and should be withdrawn. Claim 20 adds additional features to claim 18 and is patentable over Beuchler in view of Wiegener for at least the same reasons.

All outstanding objections and rejections are believed to have been met and overcome. If a telephonic conference with Applicants' undersigned representative would be useful in advancing the prosecution of the present application, the Examiner is invited to contact the

undersigned at (651) 575-3644. A notice of allowance for all pending claims is respectfully solicited.

Respectfully submitted,

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